

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003870**Date Inspected:** 09-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Huang Wen Pang and Lvliqing	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes No N/A	Approved WPS:	Yes	No N/A
		Delayed / Cancelled:	Yes	No N/A
Bridge No:	34-0006	Component:	OBG and SAS Tower Fabrication	

Summary of Items Observed:

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

Bay 4:

This QA observed ZPMC/NDE perform MT on fillet weld repair of rib stiffener to edge plate EP181A. This QA also performed 10% MT on weld joints just mentioned. For further details regarding this inspection, please see my TL-6028 on this date.

Bay 7: OBG - Floor Beam Sub Assembly

The QA Inspector randomly observed ZPMC welder Duan Xin Zhi ID Number 050502 utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the cover pass on plate splice butt joint of floor beam sub-assembly FB010-021-026. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

This QA randomly observed ZPMC welder Liu Kaige ID Number 044830, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 1G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2231-Tc-U2-F-1 to weld CJP root pass on plate splice butt joint on unequal thickness (12mm:30mm) FB014-027-002. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang

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monitoring preheat and weld parameters.

Bay 8: Tower Diaphragm

This QA observed ZPMC welder, ID #066734 and ID #048714 utilizing the FCAW Process in the 2F (Horizontal) Position with a 1.4mm diameter electrode, filler metal brand K-71TSR, semi automatic with ZPMC WPS WPS-B-T-4132 to weld fillet fill pass on fillet weld connection between tower diaphragm plate to diaphragm flange WSD1-SA309-1. In this welding, the preheat on the areas where the welders working noted to be insufficient being at 146 and 160 degree C respectively. These preheat were verified/confirmed by ABF/QA Bi Dewei and ZPMC/CWI Lvliqing using their infrared thermometer. Due to this violation, an incident report was issued against ZPMC.

This QA observed ZPMC welder, ID #045133 utilizing the SMAW Process in the 2G/3G position with a 4.0mm diameter Excalibur E9018M H4R to weld buttering on one of the wrongly cut cope on tower double diaphragm SSD1-SA248 per T-WR171. In this buttering, the preheat of the plate being welded requires 160 degree C per WPS-485-SMAW-2G/2F-REPAIR 1 but during verification it was found insufficient. This QA initially used a 180 degree C temperature crayon to check the preheat which it did not melt. This QA used 120 degree C to check the preheat in which it barely melted as shown on photo below. With this infraction, it was added to the above incident report that was issued against ZPMC.



Summary of Conversations:

No significant conversation occurred.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer